

United States District Court  
Central District of California

PROGRESSIVE SEMICONDUCTOR  
SOLUTIONS LLC,

Plaintiff,

v.

QUALCOMM TECHNOLOGIES, INC.,

Defendant.

Case No. 8:13-cv-01535-ODW(JEMx)

**CLAIM-CONSTRUCTION ORDER**  
**[59]**

**I. INTRODUCTION**

This is a patent-infringement suit involving memory in semiconductor devices, and specifically relates to an improved circuit design for such memory. Plaintiff Progressive Semiconductor Solutions, LLC. (“Progressive”) asserts U.S. Patent Nos. 6,473,349 (“the ’349 Patent”) and 6,862,208 (“the ’208 Patent”) against Qualcomm Technologies, Inc. (“Qualcomm”). The constructions of five terms across the ’349 and ’208 Patents remain in dispute.

**II. BACKGROUND**

Progressive is the owner of the ’349 Patent titled “Cascode sense AMP and column select circuit and method of operation,” and the ’208 Patent titled “Memory device with sense amplifier and self-timed latch.” (SAC ¶¶ 7–8.)

1       On September 30, 2014, Progressive brought a patent-infringement suit against  
 2 Defendants Marvell Semiconductor Inc. and Qualcomm Technologies Inc. (ECF  
 3 No. 1.) On March 3, 2014, the Court severed the action under 35 U.S.C. § 299. (ECF  
 4 No. 45.) Progressive filed an amended complaint against Qualcomm (ECF No. 46),  
 5 and a new civil action against Marvell, *Progressive Semiconductor Solutions LLC v.*  
 6 *Marvell Semiconductor*, Case No. 8:14-cv-00330-ODW-JEM (C.D. Cal. Aug. 21,  
 7 2014).

8       The two suits were coordinated for all purposes except trial. On August 6,  
 9 2014, the parties filed their final amended joint claim chart. (ECF No. 83.) The  
 10 parties dispute the construction of five terms: (1) “the amplifier being controlled by  
 11 the sense enable signal and being made operative only when the pair of pass  
 12 transistors are made nonconductive by the sense enable signal” ('349 Patent); (2) “in  
 13 response to a sense enable signal” ('349 Patent); (3) “sense enable signal” ('208  
 14 Patent); (4) “at about the same time as the assertion of the sense enable signal” ('208  
 15 Patent); (5) “storing data corresponding to the amplified data signal only in response  
 16 to the amplified data signal”/“latching the data in response to only the amplified data  
 17 signal” ('208 Patent). (*Id.*)

18       On August 11, 2014, the Court held a consolidated claim-construction hearing.  
 19 (ECF No. 87.) The parties informed the Court that a settlement had been reached  
 20 between Progressive and Marvell. On August 21, 2014, Progressive filed a  
 21 Stipulation to Dismiss Marvell from the action. *Marvell*, Case No. 8:14-cv-00330-  
 22 ODW-JEM, ECF No. 78. The Court construes the disputed terms below.

### 23                   **III.    LEGAL STANDARD**

24       The purpose of claim construction is to determine the meaning and scope of the  
 25 patent claims alleged to be infringed. *O2 Micro Int'l Ltd. v. Beyond Innovation Tech.*  
 26 *Co., Ltd.*, 521 F.3d 1351, 1360 (Fed. Cir. 2008). Claim construction is a question of  
 27 law to be decided by the court. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967,  
 28       //

1 979 (Fed. Cir. 1995). In determining the proper construction of a claim, the Court  
 2 reviews both intrinsic and extrinsic evidence, placing emphasis on the former.

3 **A. Intrinsic Evidence**

4 The court begins with intrinsic evidence of claim meaning—which consists of  
 5 the claim language, patent specification, and, if in evidence, prosecution history.  
 6 *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005); *Vitronics Corp. v.*  
 7 *Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996).

8 The Court must always begin with an examination of the claim language itself.  
 9 *August Tech. Corp. v. Camtek, Ltd.*, 655 F.3d 1278, 1284 (Fed. Cir. 2011); *see also*  
 10 *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998)  
 11 (“The claims define the scope of the right to exclude; the claim construction inquiry,  
 12 therefore, begins and ends in all cases with the actual words of the claim.”). Claim  
 13 language is paramount; the other intrinsic and extrinsic evidence—while valuable—  
 14 cannot be utilized to rewrite the claim language. *SuperGuide Corp. v. DirecTV*  
 15 *Enter., Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004).

16 The terms used in the claims are generally given their “ordinary and customary  
 17 meaning.” *Phillips*, 415 F.3d at 1312. This “ordinary and customary meaning” is the  
 18 meaning as understood by a person of ordinary skill in the art (“POSITA”) in question  
 19 at the time of the invention. *Id.* The POSITA “is deemed to read the claim term not  
 20 only in the context of the particular claim in which the disputed term appears, but in  
 21 the context of the entire patent, including the specification.” *Id.*

22 A patentee is presumed to have intended the ordinary meaning of a claim term  
 23 unless the patentee (1) sets out a definition and acts as his own lexicographer, or  
 24 (2) disavows the full scope of a claim term either in the specification or during  
 25 prosecution.” *Thorner v. Sony Comp. Entm't Am. LLC*, 669 F.3d 1362, 1365 (Fed.  
 26 Cir. 2012).

27 The specification is “always highly relevant to the claim construction analysis.”  
 28 *Markman*, 52 F.3d at 978. “[T]he specification may reveal a special definition given

1 to a claim term by the patentee that differs from the meaning it would otherwise  
 2 possess. In such cases, the inventor's lexicography governs." *Phillips*, 415 F.3d at  
 3 1316. But the Court must be wary of "improperly importing a limitation from the  
 4 specification into the claims." *Retractable Techs., Inc. v. Becton*, 653 F.3d 1296, 1305  
 5 (Fed. Cir. 2011).

6 The Court may also consider the patent's prosecution history. The prosecution  
 7 history encompasses the complete record of the proceedings before the PTO,  
 8 including the prior art cited during the examination of the patent." *Id.* The  
 9 prosecution history provides evidence about how the PTO and the inventor understood  
 10 the invention. *Id.* But "because the prosecution history represents an ongoing  
 11 negotiation between the PTO and the applicant, rather than the final product of that  
 12 negotiation, it often lacks the clarity of the specification and thus is less useful for  
 13 claim construction purposes." *Id.*

14 **B. Extrinsic evidence**

15 Courts may also rely on extrinsic evidence to better understand the underlying  
 16 technology and to determine what a POSITA would understand the claim terms to  
 17 mean. *Phillips*, 415 F.3d at 1318. Extrinsic evidence "consists of all evidence  
 18 external to the patent and prosecution history, including expert testimony, dictionaries,  
 19 and learned treatises." *Id.* at 1317. But while extrinsic evidence can be useful, it is  
 20 "unlikely to result in a reliable interpretation of patent claim scope unless considered  
 21 in the context of the intrinsic evidence." *Id.* at 1319. Thus, it is less significant than  
 22 intrinsic evidence. *Id.*

23 **IV. DISCUSSION**

24 The patents at issue address memory within a semiconductor chip, and more  
 25 particularly, novel circuit designs and methods for accessing that memory in a manner  
 26 that increases speed and reliability, while reducing power consumption of the chip.  
 27 To understand the patents, some background information is useful.

28 / / /

1    **A. Background of the inventions**

2           Qualcomm sells semiconductor chips referred to as integrated circuits. The  
3 data stored on the chips is in SRAM. SRAM data is stored in tiny circuits, called  
4 memory cells, which collectively form a memory array. (ECF No. 75, Ex. A.) Data is  
5 accessed via unique addresses assigned to the individual memory cells, which are  
6 organized into rows and columns. (*Id.*) Thus, a memory cell's address consists of a  
7 row and column address part. (*Id.*) "Wordlines" run along the rows of the memory  
8 while "bit lines" run up and down. (*Id.*) Each memory cell is associated with a  
9 wordline and two "complementary" bit lines, and each set of complementary bit lines  
10 is connected to a sense amplifier. (*Id.*)

11          The electric signal held in the memory cells is very small. (*Id.*) The signal is  
12 read as two complementary or "differential" signals that each have different voltage  
13 values. (*Id.*) The differential signals that appear on the bit lines collectively represent  
14 a single bit of logical information—either 0 or 1. (*Id.*) But because the voltage  
15 differences involved are so small, a special "sense amplifier" circuit is employed to  
16 detect and amplify the differential signals. (*Id.*) The retrieved bit (0 or 1) from the  
17 selected memory cell is then stored in a storage device called a "latch" for later use.  
18 (*Id.*)

19          A transistor is commonly used as an electronic switch. (*Id.*) Pass transistors  
20 may be used to construct an "isolation circuit," because when the transistors are turned  
21 "off," they serve to "isolate" one part of the circuit (for example, the data paths) from  
22 another part of the circuit (for example, the sense amplifier). (*Id.*) The pass  
23 transistors allow variable signals to pass and travel to the sense amplifier when they  
24 are conductive; signals cannot travel to the sense amplifier when the pass transistors  
25 are nonconductive. (*Id.*)

26          The '349 Patent is directed to sense amplifier circuitry used in RAM. The  
27 patent discloses configurations of sense amplifier circuitry that avoid drawing excess  
28 charge from the bit lines.

1        The '208 Patent is also directed to amplifying circuitry for use in RAMs. ('208  
 2 Patent 1:5–13.) The patent discloses an isolation circuit and a self-timed latch. The  
 3 self-timed latch does not require a clock signal. (*Id.* 3:28–32.) Rather, its timing is  
 4 determined by the incoming data signals generated by the sense amplifier. (*Id.*)

5        Both patents explain that the designs decrease the chips' size and power  
 6 consumption while increasing the speed and power.

7 **B. Disputed claim terms of the '349 Patent**

8 <b>CLAIM TERM</b>	9 <b>PLAINTIFF'S</b> <b>CONSTRUCTION</b>	10 <b>DEFENDANT'S</b> <b>CONSTRUCTION</b>
10 <b>1. "the amplifier being 11        controlled by the 12        sense enable signal 13        and being made 14        operative only when 15        the pair of pass 16        transistors are made 17        nonconductive by 18        the sense enable 19        signal"</b>	Plain meaning, except as to "operative" and "sense enable signal"	"the sense enable signal simultaneously activates the amplifier and turns off the pair of pass transistors"

17        The parties request construction of an entire limitation—"the amplifier being  
 18 controlled by the sense enable signal and being made operative only when the pair of  
 19 pass transistors are made nonconductive by the sense enable signal"—but only  
 20 actually dispute the meaning of "operative only when" in the context of the limitation.  
 21 Essentially, the parties dispute whether "operative only when" expresses temporal  
 22 requirements that demand *simultaneous* coordination of the isolation and  
 23 amplification processes by the sense enable signal.

24        Progressive asserts that the claim language does not expressly or impliedly  
 25 require that the sense enable signal "simultaneously activate" the amplifier and  
 26 deactivate the pass transistor. Rather, Progressive argues, the claim language is broad  
 27 enough to permit either a simultaneous or sequential effect. Qualcomm argues that  
 28        //

1 because the sense enable signal is used to trigger processes at *both* the amplifier and  
 2 the pass transistors, simultaneous coordination is necessarily required.

3 Although the limitation contains technical terminology (e.g., amplifier, sense  
 4 enable signal, and pass transistors) the disputed language itself is a general-usage  
 5 phrase that neither party asserts has any specialized meaning in the art.

6 Beginning with the words of the claims themselves, the plain meaning of  
 7 “operative only when” does not convey simultaneous coordination. Rather, it  
 8 indicates a condition that must be met: the pass transistors must be nonconductive for  
 9 the sense amplifier to function.

10 The amplifier described in the ’349 Patent is efficient in power consumption.  
 11 (See ’349 Patent 1:38–40 (“An objective of memory sense amplifiers is to avoid  
 12 drawing excess charge from a bit line subsequent to clocking the sense amplifier.”)).  
 13 The patent explains that the amplifier is “operative” (amplifying a differential signal)  
 14 *only when* it can avoid drawing excess charge from the bit lines. (*Id.* 7:42–45; 6:67–  
 15 7:1 (“[The] sense amplifier **72** does not drain current from either bit line after  
 16 sensing.”)) And the amplifier can avoid drawing excess charge from the bit lines *only*  
 17 *when* the pair of pass transistors “are made nonconductive” by the sense enable signal.  
 18 (*Id.* 8:37–41.) Although the claim language indicates the sense enable signal’s dual  
 19 function—amplification and isolation—this does not dictate that these processes be  
 20 synchronous, as Qualcomm urges.

21 In support of its simultaneous-coordination argument, Qualcomm points to  
 22 language in the specification that instructs when the sense enable signal is asserted, it  
 23 turns on the amplifier and turns off the pass transistors. (E.g., ’349 Patent at 3:41–45  
 24 (“When the signal SE is asserted, pass gates 30 and 31 are turned off. Transistor 39 is  
 25 turned on when signal SE is asserted.”); 4:6–8 (“when sense enable signal SE activates  
 26 amplifier 47, pass gates 44 function to disconnect amplifier 47 from data line pair.”);  
 27 4:66–5:1 (“[w]hen the sense enable signal SE is asserted, P-15 channel transistor pass  
 28 gates 70 and 72 are turned off.”).) But this language does not specify that the

1 resulting effects (activation and deactivation) are *simultaneous*. The specification  
 2 does not clearly redefine the conditional “operative only when” to implicitly or  
 3 explicitly require synchronicity. Indeed the extrinsic evidence calls into question  
 4 whether the signal could arrive at two separate locations within a circuit at *exactly* the  
 5 same time. (See ECF No. 80, Ex. 1.)

6 “Operative only when” does not suggest, by itself, anything regarding  
 7 simultaneous events. The specification discloses that a single signal—the sense  
 8 enable signal—triggers both the amplifier and the pass transistors, but nothing in the  
 9 claims, specification, or prosecution history indicate the applicant’s intention to  
 10 mandate simultaneous coordination. Accordingly, there is no reason to deviate from  
 11 the plain conditional meaning of the disputed language: the pass transistors must be  
 12 nonconductive for the sense amplifier to function.

13 14 <b>CLAIM TERM</b>	15 <b>PLAINTIFF’S CONSTRUCTION</b>	16 <b>DEFENDANT’S CONSTRUCTION</b>
17 18 2. <b>“in response to a sense enable signal”</b>	Plain meaning, except as to except again as to the technical term “sense enable signal”	“directly controlled by a [the] sense enable signal”

19 The presumed meaning of “in response to” is the plain and ordinary meaning of  
 20 the phrase. *Phillips*, 415 F.3d at 1312. “In response to” is a general-usage term that  
 21 neither party asserts has any specialized meaning in the art.

22 Progressive asserts that “in response to” should be given its plain and ordinary  
 23 meaning. Qualcomm argues that, read in context of the claims and specification, the  
 24 meaning of “in response to” is “directly controlled by.” Qualcomm argues that the  
 25 specification provides for a direct cause-and-effect relationship between the sense  
 26 enable signal and the pass transistor control. (See, e.g., ’349 Patent 3:41–42 (“When  
 27 the signal SE is asserted, pass gates 30 and 31 are turned off.”); 4:6–8 (“[W]hen sense  
 28 enable signal SE activates amplifier 47, pass gates 44 function to disconnect amplifier

1 47 from the data line pair.”).) Thus, Qualcomm asserts, the Court should adopt its  
 2 proposed construction to make clear that the sense enable signal—and no other  
 3 signal—controls the isloation process.

4 Claim 1 of the ’349 Patent claims, in relevant part, reads:

5 A sense amplifier comprising: a pair of pass transistors having first and  
 6 second inputs respectively connected to a data path and complementary  
 7 data path for receiving a differential data signal, the pair of pass  
 8 transistors respectively connecting the data path and complementary data  
 9 path at first and second outputs thereof *in response to a sense enable*  
 10 *signal*, the first and second inputs of the pair of pass transistors are not  
 11 electrically the same as the first and second outputs thereof when the pair  
 12 of pass transistors are *disabled by the sense enable signal* . . . .

13 (8:30–41 (emphasis added). Neither the claims nor the disclosure are ambiguous as to  
 14 whether the data line inputs are dependent on any signal other than sense enable  
 15 signal.

16 The function of claim construction is to clarify and, when necessary, explain  
 17 what the patentee covered by the claims. *S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d  
 18 1554, 1568 (Fed. Cir. 1997). Construction of the disputed language is unnecessary  
 19 here, as the claim scope is clear. The plain meaning of “in response to” conveys a  
 20 stimulus and an effect. Read in context of the claims and specification, that  
 21 relationship is unchanged: the plain meaning of “in response to” would be understood  
 22 to mean that the pass transistors react to the stimulus of the sense enable signal.  
 23 Because the intrinsic evidence does not mandate a specialized definition of “in  
 24 response to,” the Court declines to depart from its plain and ordinary meaning.

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1    **C. Disputed terms of the '208 Patent**

2 <b>CLAIM TERM</b>	3 <b>PLAINTIFF'S</b> <b>CONSTRUCTION</b>	4 <b>DEFENDANT'S</b> <b>CONSTRUCTION</b>
5 <b>1. "sense enable 6    signal"</b>	7    Plain meaning; "a 8    signal that enables the 9    sense amplifier to 10   function as intended"	6    Plain meaning

7    Although both parties agree that the plain meaning of "sense enable signal" applies, the parties dispute what that plain meaning is. Progressive asserts that the plain and ordinary meaning of sense enable signal is "a signal that enables the sense amplifier to function as intended."

11    Qualcomm argues that Progressive's proposed construction is confusing and unnecessary because the full description of the sense enable singal's function is already given in the claim. The Court agrees.

14    The patent claims "a sense amplifier for amplifying a data signal from a selected one of the plurality of memory cells via the bit line to provide an amplified data signal . . . *in response to asserting a sense enable signal.*" ('208 Patent 7:5–8) (emphasis added).) Thus, the patent is clear that the function of the sense enable signal is to stimulate the sense amplifier to amplify a data signal. (*See also id.* 1:25–27.) Thus, the construction "function as intended" is superfluous because the intended function is clearly stated in the claim.

21    The ordinary meaning of the "sense enable signal"—read in the context of the patent—is clear and the specification is consistent with that meaning. Accordingly, the Court declines to depart from the ordinary meaning of "sense enable signal."

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CLAIM TERM	PLAINTIFF'S CONSTRUCTION	DEFENDANT'S CONSTRUCTION
2. <b>“at about the same time as the assertion of the sense enable signal”</b>	“immediately before or immediately after the assertion of the sense enable signal, during a time span that is a fraction of the associated clock signal’s period”	Indefinite

Claims 1 and 22 of the '208 Patent recite that the memory cells are decoupled from the sense amplifier “at about the same time” as the assertion of the sense enable signal. (7:9–13; 10:23–25.) The parties dispute whether “at about the same time” is indefinite.

For a patent claim to be valid it must “particularly point [] out and distinctly claim[] the subject matter which the applicant regards as his invention.” 35 U.S.C. § 112(b). The purpose of this definiteness requirement is “to ensure that the claims delineate the scope of the invention using language that adequately notifies the public of the patentee’s right to exclude.” *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005). A claim is indefinite if, when “read in light of the specification delineating the patent, and the prosecution history, [the claims] fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2124 (2014).

Qualcomm contends that “at about the same time” is an indefinite term of degree, which cannot be construed, because no objective anchor is provided in the specification. The claim term at issue here—“about”—is a term of degree. *Datamize, LLC*, 417 F.3d at 1351. When the patentee uses a word of degree, the court “must determine whether the patent’s specification provides some standard for measuring that degree.” *Seattle Box Co. v. Indus. Crating & Packing, Inc.*, 731 F.2d 818, 826

1 (Fed. Cir. 1984). If the specification does not provide a standard for imposing a more  
 2 precise construction of the term, the Federal Circuit has ruled that imposing a more  
 3 precise construction would be error. *See Playtex Prods., Inc. v. Procter & Gamble*  
 4 Co., 400 F.3d 901, 907 (Fed. Cir. 2005); *Cordis Corp. v. Medtronic AVE, Inc.*, 339  
 5 F.3d 1352, 1360 (Fed. Cir. 2003).

6 Here, the Court finds that the '208 Patent specification provides a sufficient  
 7 standard for measuring with reasonable certainty the boundaries of “at about the same  
 8 time.” The specification provides a detailed discussion about the timing and sequence  
 9 of the two relevant signals and corresponding events.

10 Two signals are asserted “at about the same time:” (1) the sense enable signal—  
 11 which is responsible for amplifying the differential data signal—and (2) the isolation  
 12 (CD) signal—which, when driven high, is responsible for decoupling the memory cell  
 13 from the amplifier. Figured 4 shows the temporal relationship between the circuit  
 14 signals, as a function of time:

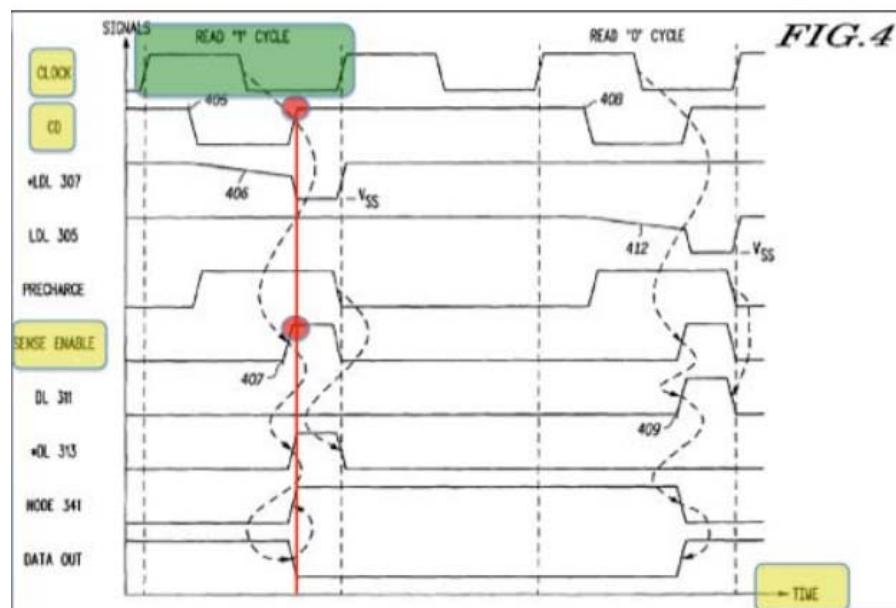


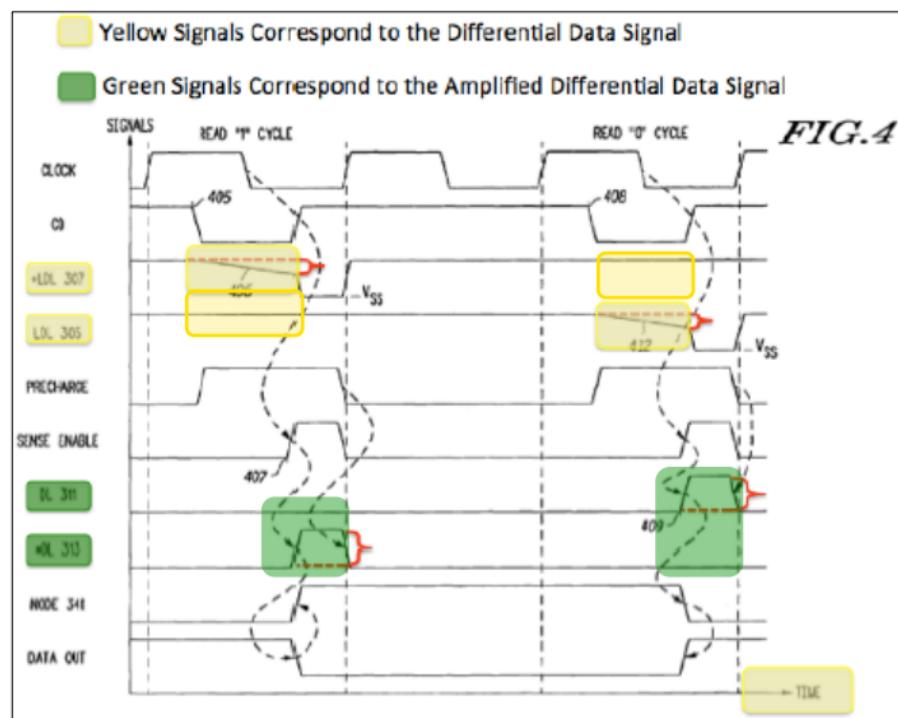
Figure 4 shows the operation of the sense enable and isolation signals over a period of time equal to three clock cycles.<sup>1</sup> Towards the end of the first clock cycle

<sup>1</sup> The clock cycles are defined between the dotted lines.

1 (highlighted in green), isolation signal CD is asserted and the sense enable signal is  
 2 asserted (see red dots)—“at about the same time.” The timing of the two signals are  
 3 “logically derived from the clock signal”<sup>2</sup>—a known point of reference. (*Id.* 4:4–7.)

4 The patent explains that the sense enable signal should be asserted “[a]fter a  
 5 predetermined period of time from when the CD signal is driven low at **405** . . . .” (*Id.*  
 6 4:1–4. This “predetermined period of time” is determined by the POSITA based on  
 7 the intended application (*e.g.*, DRAM or SRAM). The description of Figure 4 states  
 8 that at “about the same time that the SENSE ENABLE signal is asserted the CD signal  
 9 is driven high to isolate the local data lines **LDL 305** and **\*LDL 307** from the bit lines  
 10 . . . .” (*Id.* 4:9–12.)

11 Figure 4 also shows the time span during which a differential data signal is  
 12 generated (the time span during which one of the signal’s voltage is pulled down):



2 The clock signal is provided by clock circuitry external to the memory device. The clock signal is represented in Figure 5 of the '208 Patent. (*Id.* 3:46–47.)

1       Progressive has also presented extrinsic evidence that the term “at about the  
 2 same time” is easily understood by a POSITA. The Federal Circuit has explained that  
 3 although courts “have emphasized the importance of intrinsic evidence in claim  
 4 construction, we have also authorized district courts to rely on extrinsic evidence, such  
 5 as expert testimony.” *Datamize*, 417 F.3d at 1348 (internal quotation marks omitted).  
 6 The opinion of an expert can illuminate the meaning of an ambiguous term of degree.  
 7 *See Datamize*, 417 F.3d at 1353-54; *Amgen, Inc. v. Chugai Pharm. Co., Ltd.*, 927 F.2d  
 8 1200, 1218 (Fed. Cir. 1991).

9       Regarding “at about the same time” Progressive’s expert Dr. John Hayes  
 10 testified that the specification explains to him—as a POSITA—how to design an  
 11 integrated circuit like the claimed invention. (ECF No. 80, Ex. A.) Dr. Hayes  
 12 testified that “it would not be difficult for a skilled artisan to sequence the signals in  
 13 the desired manner [because] . . . the timing of the SENSE ENABLE and CD signals  
 14 is based on the clock signal and is therefore a known point of reference. (*Id.*)  
 15 Dr. Hayes also testified that because the patent provides a clear signal sequence—  
 16 *after* a differential data signal has been generated but *before* the sense enable signal is  
 17 deasserted—and Figure 4 shows the time span during which the differential data  
 18 signal is generated, a POSITA has sufficient data to design the circuit in accordance  
 19 with the claim or to avoid infringement. (*Id.*)

20      Qualcomm argues that Figure 4 does not provide a *standard* for measuring  
 21 whether signals are triggered at the same time, but rather only illustrates that signals  
 22 that are triggered at exactly the same time—as shown in the drawing—are triggered at  
 23 “about the same time.” Qualcomm asserts that Figure 4 does not teach how far apart  
 24 those signals can be triggered and still fall within the about-the-same-time scope.

25      The Court does not agree. The’208 Patent teaches specific confines within  
 26 which the the two signals should be asserted—(1) within a single clock cycle, (2) after  
 27 a differential data signal has been generated, and (3) before the sense enable signal has  
 28 been deasserted (driven low). Additionally, the written description explains that

1 timing signals are logically derived from the clock signal. ('208 Patent 76:24–77:4.)  
 2 The timing diagram provides all the data necessary for a POSITA to understand the  
 3 boundaries of the claim to a reasonable certainty.

4 The omission of a specific, quantifiable time period (e.g., “within 10  
 5 nanoseconds”) within which the two events should occur is reasonable for this type of  
 6 invention. Circuit designers require some flexibility and discretion to program the  
 7 timing in accordance with the desired application. Thus, claiming events that occur  
 8 within a narrow, specified window of time (a single clock cycle) and “at about the  
 9 same time” is sufficiently definite under § 112(b). The language “at about the same  
 10 time” is properly construed as: “After a differential data signal is generated but before  
 11 the sense enable signal is deasserted, occurring within a single clock cycle.”

12 13 <b>CLAIM TERM</b>	14 <b>PLAINTIFF'S CONSTRUCTION</b>	15 <b>DEFENDANT'S CONSTRUCTION</b>
16 17 18 19 20 <b>3. “storing data corresponding to the amplified data signal only in response to the amplified data signal” / “latching the data in response to only the amplified data signal”</b>	Plain meaning	“storing data . . . data signal <i>only dependent on</i> the amplified data signal;”  “latching <i>only dependent</i> <i>on</i> the amplified data signal”

21 Although Defendants purport to request construction of an entire limitation—  
 22 “storing data corresponding to the amplified data signal only in response to the  
 23 amplified data signal”—the dispute actually surrounds the phrase “only in response  
 24 to.” The parties do not dispute the meaning of “only in response to,” but Defendants  
 25 seek to replace the phrase “in response to” with “dependent on.”

26 Qualcomm asserts that its proposed construction clarifies that plain meaning of  
 27 “only in response to”—that no other timing signal can induce data storage. In

28 / / /

1 contrast, Progressive asserts Qualcomm's replacement of "in response to" with  
2 "dependent on" is redundant and unnecessary.

3 The presumed meaning of "only in response to" is the plain and ordinary  
4 meaning of the phrase. *Phillips*, 415 F.3d at 1312. "Only in response to" is a general-  
5 usage phrase that neither party asserts has any specialized meaning in the art. The  
6 plain meaning of "in response to" connotes a stimulus and an effect, but is equivocal  
7 as to the exclusivity of that stimulus. But the addition of "only" into the phrase  
8 eliminates the equivocality, clarifying that it is singly the function of the designated  
9 stimulus that brings about the effect.

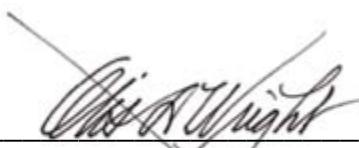
10 Thus, the plain meaning of "only in response to" to a POSITA, read in the  
11 context of the claim language, is that data storage (effect) is *exclusively* in response to  
12 the the amplified data signal (stimulus). Because both parties agree that this is the  
13 meaning of the phrase, any further construction would be redundant. The plain and  
14 ordinary meaning of "storing data corresponding to the amplified data signal only in  
15 response to the amplified data signal"/"latching the data in response to only the  
16 amplified data signal" applies.

17 **V. CONCLUSION**

18 For the reasons discussed above, the Court adopts the aforementioned  
19 constructions.

20 **IT IS SO ORDERED.**

21  
22 September 4, 2014

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26 **OTIS D. WRIGHT, II**  
27 **UNITED STATES DISTRICT JUDGE**  
28